



# **NERC Data Collection, Events Analysis, and Guidelines**

**Bob Collins & Jagan  
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# **NERC Data Collection, Events Analysis, and Guidelines**

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## Regional Coordination for:

- Reliability Assessments
- Performance Analysis
- Event Analysis
- Situation Awareness

## Guidelines, References, and Whitepapers

## Data Collection



# NERC Data Collection – Systems

**TADS – Transmission Availability Data System**

**GADS – Generation Availability Data System**

**DADS – Demand Response Availability Data System**

**MIDAS – Misoperations Information Data Analysis System**

- Each system has an affiliated NERC Technical Working Group
- Members: registered entities, Regional Entities, and NERC Staff



## Section 800, Reliability Assessment and Performance Analysis:

- Seasonal Assessments
- Major Event Analysis
- NERC Alerts
- Generating Availability Data System (GADS)

## Section 1600 Data Requests



# DADS – Sunset?

## Collects Demand Response (DR) Deployment Data

- In service for 12 months or more
- 10 MW or more
- Does not include economic DR

## Applies to Balancing Authorities and some Distribution Providers

## Submitting Data – OATI portal

## Entities Provide Data Twice a Year: June and December

## Texas RE Rep: [Bob Collins](#)



## Collects BES Transmission Outage Data

- AC Circuits
- Transformers (low side  $\geq 100\text{kV}$ )
- Reactive devices
- AC/DC Back-to-Back Converters

## Applies to Transmission Owners & Generation Owners with Transmission

## Submitting Data – OATI Portal

## Entities Provide Data Quarterly

- Due 45 days after the end of a quarter

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# GADS – Conventional (Fossil Fueled, Nuclear, Hydro)

## Collects Generation Outage and Availability Data

- Generators >20 MW nameplate mandatory, others optional

## Applies to Generation Owners with Gas, Coal, Nuclear and Hydro

## Entities Provide Data Quarterly

- Due 45 days after the end of a quarter

## Submitting Data – OATI Portal

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## Collects Generation Outage and Availability Data

- All facilities >75 MW nameplate submit data in 2020
- Smaller facilities may voluntarily participate and share benefits

## Applies to Generation Owners with Wind Turbine Facilities

## Entities Provide Data Quarterly

- Due 45 days after the end of a quarter

## Submitting Data – NERC Portal (xRM)

- Entities upload spreadsheets

Texas RE Reps: [Jagan Mandavilli](#) and [Bob Collins](#)



## Solar Generation

- Phased in implementation expected to begin in 2023
- Other units may voluntarily participate and share benefits

## Applies to Generator Owners

## Entities Provide Data Quarterly

- Dates not set

## Submitting Data – NERC Portal

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## Collects Protection Systems Misoperations Data for BES Facilities

### Entities Provide Data Quarterly

- Due 60 days after end of quarter
- Separate submittal to ERCOT ISO required per Operating Guide

### Submitting Data – NERC Portal (xRM)

- Data Submission Form Site: <https://misops.nerc.net/>
- MIDAS User Site: <https://xrm.nerc.net/>
- Bulk upload using an .xlsx file or item-by-item entry through portal
- Two responses required – operations and misoperations, either data or opt-out waiver for each.

### Applies to Generation Owners, Transmission Owners, and Distribution Providers with BES Protection System

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# NERC Alerts

## Address Conditions with Potential to Cause Major Events

## Instructions and Schedule are Included with NERC Alert Notices

- Some require no action
- Some require acknowledgement and authorized approval
- Some require the above and data or survey responses

## Submitting Data – Dedicated NERC Alert portal

- Separate acknowledgements and approvals through the NERC Alert portal
- Data or survey requests will be detailed in NERC Alert instructions

## Applies to all Entity Types (potentially)

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# Entity Tasks

**Obtain Access to These Systems by Request to NERC**

**Maintain List of Contacts and User Administration**

## **Submit Data:**

- On time
- Thorough and accurate
- Per data reporting or other instructions
- Provide Acknowledgements, Approvals or Opt-out Waivers
- Verify assets and contact information

**Respond to Follow-Up Inquiries from Texas RE**

**Contact Texas RE with Your Questions and Problems**

## **Train Using:**

- Web materials
- On-site classes
- Questions



# How is the Data Used?

**NERC State of  
Reliability Report**

**Texas RE  
Assessment of  
Reliability  
Performance**

**Quarterly Metrics  
to Texas RE  
Member  
Representatives  
Committee**

**Entity Internal  
Studies**

## **Other Studies:**

- Future probabilistic assessments
- Winter outage reviews and turbine outage reports
- Fuel availability assessment
- Human Error analytics



# Event Analysis Process – Initial Notification

## Promotes a Structured and Consistent Approach to Performing Event Analyses

- Events that meet EOP-004-4 and/or DOE-OE-417 criteria

**Applies to: Reliability Coordinators, Balancing Authorities, Transmission Owners, Transmission Operators, Generator Owners, Generation Operators, and Distribution Providers**

## Entity Reporting

- Assess the event and determine the event category
- Fill out EOP-004 and/or OE-417 report(s) as initial notice within 24 hours and send to:
  - DOE: doehqeoc@hq.doe.gov (only if OE-417 event)
  - NERC: systemawareness@nerc.net
  - Texas RE: RAPA@texasre.org
  - ERCOT: shiftsupervisors@ercot.com





# Event Analysis Process – Reporting (cont.)

## Texas RE Actions

- Contact the reporting entity
- Request for data
  - Data designated as confidential by entity will be treated as confidential
- Coordinate with ERCOT
- Cause coding analysis
- Prepare reports
- Lessons learned document
- Entities are encouraged to prepare their own event assessments

**Texas RE Reps: Bob Collins, David Penney, and Jagan Mandavilli**



# Reliability and Security Guidelines

## Best practices, recommendations or performance observations

- Developed by NERC stakeholder technical groups (industry volunteers sought)
- Address current topics, often where no Standards exist

## Not Mandatory - Facts and Circumstances Dependent

- **Do not directly address compliance (guideline vs. guidance documents)**
- Texas RE will follow-up on applicability and usefulness

## Regional Entities and Registered Entities Can Comment

- Publicly posted
- Registered entity staff often help with drafting



# Learn More

- **NERC Webpages by Program Areas**
  - [Reliability Assessment](#) for Long-term and short-term reports
  - [Performance Analysis](#) for State of Reliability Report
  - [Event Analysis](#) for events analysis and lessons learned
- **NERC-Led Hands-On Training**
- **Mailing List for NERC Working Groups**
- **Texas RE Webpage under [Reliability Services](#)**
  - “Performance Analysis” for data collection
  - “Events Analysis” for itself
  - “Situation Awareness” for NERC Alerts
- **Texas RE Contact Points – call us anytime!**



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The background of the slide features a blurred Texas state flag on the left and a target with several darts on the right. The darts are clustered in the center of the target, suggesting a focus on a specific point.

# Questions?



**TEXAS RE**

Ensuring electric reliability for Texans